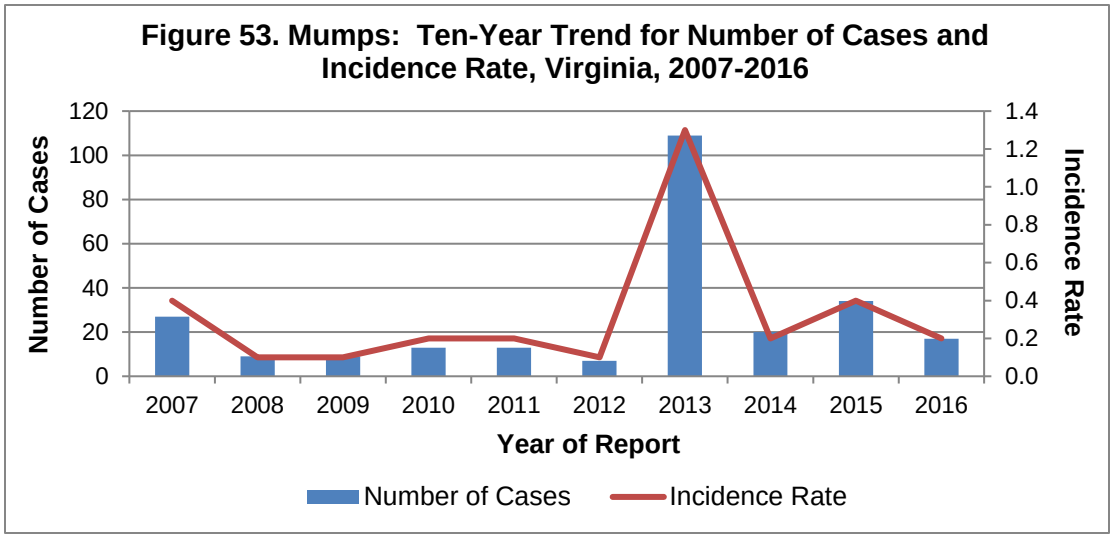
Mumps

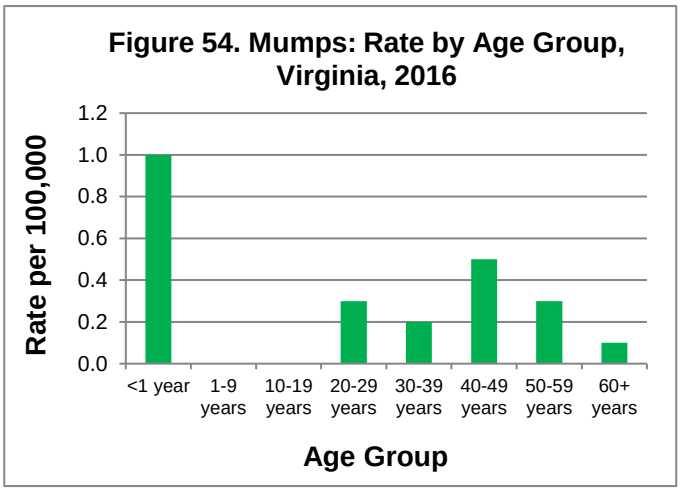
Agent: Mumps (virus)
Mode of Transmission: Person-to-person transmission through respiratory droplets, as well as through direct contact with saliva of an infected person.
Signs/Symptoms: Fever, swelling and tenderness of one or more salivary glands. Mumps infection may present with only nonspecific or primarily respiratory symptoms and as many as 20% of mumps infections are asymptomatic. Serious complications are rare but can occur in the absence of parotitis (inflammation of salivary glands).
Prevention: Vaccination, preferably as measles-mumps-rubella (MMR) vaccine, should be administered beginning at age 12 months. Two doses of mumps-containing vaccine are recommended for school-aged children, healthcare workers, international travelers, and college students. Although MMR vaccine is very effective, it does not provide complete protection against mumps. Two doses are 88% effective at protecting against mumps; one dose is 78% effective. Outbreaks can still occur in highly vaccinated U.S. communities, particularly in close-contact settings. However, high vaccination coverage helps limit the size, duration, and spread of mumps outbreaks.
Other Important Information: Cases and outbreaks of mumps continue to occur across the United States. In 2016, the United States reported the most cases of mumps in a decade. The increase in cases was driven by two outbreaks that occurred in Arkansas and Iowa. The community outbreak in Arkansas accounted for over 1,800 cases while Iowa reported over 680 cases. While the outbreak in Iowa began on a university campus, it spread to the community. Arkansas' outbreak was a community event but those affected by the outbreak had the same close contact as seen at a university setting. Both outbreaks occurred within populations with high two-dose MMR vaccine coverage; a third dose was recommended as outbreak response. Four other states (Indiana, Illinois, Massachusetts, and Oklahoma) reported over 100 cases each. Previous increases in mumps cases were observed in 2006 and 2014; university and community-based outbreaks were also reported in those years.

Mumps: 2016 Data Summary	
Number of Cases:	17
5-Year Average Number of Cases:	36.6
% Change from 5-Year Average:	-54%
Incidence Rate per 100,000:	0.2

In 2016, 17 cases of mumps were reported in Virginia which represents a 54% decrease from the five-year average of 36.6 cases per year. The statewide incidence rate in 2016 of 0.2 cases per 100,000 decreased from the rate observed in 2015 (0.4 per 100,000) (Figure 53).



Incidence was highest among infants less than one year of age with a rate of 1.0 cases per 100,000, followed by the 40-49 year age group with 0.5 cases per 100,000. All other age groups had incidence rates under the state rate of 0.4 cases per 100,000 (Figure 54). These incidence rates do not mirror the national trend of cases occcuring within the college age groups. Race information was not reported for 29% of cases. Among those with a known race, incidence was slightly higher in the white population (0.2 cases per 100,000) than the black population (0.1 cases per 100,000). The incidence rate for males (0.3 per 100,000) was higher than the rate in females (0.1 per 100,000).



Cases were reported in four of five regions, with the largest proportion and highest incidence occurring in the northern region (12 cases, 0.5 per 100,000). The remaining regions had incidence rates ranging from 0.2 to 0.0 per 100,000, with no cases being reported from the eastern region. Geographically, cases were clustered as seen in the map below. Onset of cases occurred throughout the year with the highest percentage (35%) reported during the fourth quarter.

Mumps Incidence Rate by Locality
Virginia, 2016